



## **FEMA-NIBS BSSC CRSC**

**Burlingame, CA**

**November 12 & 13, 2015**

*Summary Minutes*

**NOVEMBER 12, 2015**

### **Participants**

#### *CRSC Members*

Steven Winkel, Steven Winkel, Chair  
Robert Bachman, RE Bachman Consulting Engineers  
Dan Dolan, Washington State University  
Gary Ehrlich, National Association of Home Builders  
John Gillengerten, John Gillengerten  
Perry Haviland, American Institute of Architects  
John Hooper, Magnusson Klemencic Associates  
Kevin Moore, Simpson Gumpertz Heger  
Jonathan Siu, City of Seattle, Washington

#### *CRSC Advisory Members*

S.K. Ghosh, S.K. Ghosh Associates (by telephone)  
Jennifer Goupil, ASCE/SEI (by telephone)  
Bonnie Manley, American Iron and Steel Institute

#### *Observers*

Jeff Ellis, Simpson Strong-Tie

#### *FEMA/NIBS*

Mai Tong, FEMA  
Mike Mahoney, FEMA  
Philip Schneider, BSSC/NIBS

Steve Winkel opened the meeting at 9:00 p.m. PST with participant introductions, a reading of the anti-trust statement, and a review of the agenda.

The following are proposals for modifying the IBC (International Building Code) and the IEBC (International Existing Building Code) considered by the CRSC and categorized by action taken.

### **Proposals to be sponsored by the CRSC**

- S.K. Ghosh presented a proposal (See Attachment 1 – 1613.1) to modify 1613.1 in the IBC to not exclude Chapter 14.2.4 after an alternative seismic design force level for diaphragms was included in new Section 12.10.3 of ASCE 7-16. Bonnie Manley suggested rewriting the text to state: “... in accordance with ASCE 7, excluding Chapter 14 unless otherwise noted.” The Chapter 14.2.4 reference will be added to IBC Chapter 16. S.K. will consider this alternative and draft the proposal to be offered jointly by the CRSC with ASCE. The draft will be sent to Jennifer Goupil, John Hooper, Ron Hamburger as proponents for ASCE, and Philip Schneider for submission on behalf of CRSC.

### **Proposals to be co-sponsored by the CRSC**

- The CRSC and USGS will provide a proposal that USGS will write for incorporating the new USGS maps into the IBC and the IRC (International Residential Code). This proposal will serve as an alternate proposal to ASCE’s proposals to coordinate ASCE 7-16 with the IBC and for IBC Chapter 16 to do nothing more than reference ASCE 7-16.

### **Proposals to be supported by the CRSC at the hearings in Louisville**

- Kevin Moore presented a proposal (See Attachment 2 – 104.11) to require a third party peer review by an evaluation report provider when alternate materials, design and methods of construction and equipment are provided. This proposal is meant to prevent the practice of organizations developing their own criteria to perform evaluations to support the use of an alternate material. This practice has been occurring for light frame assemblies, but is expected to be applied to other assemblies. The proposal is anticipated to encounter resistance from the organizations that prepare evaluations to support alternatives and, building officials whose duties will be increased. To ensure review by the ICC Structural Committee, instead of the Administrative Committee, the proposal should be oriented to ASCE Chapter 12.2 and moved to IBC Chapter 16 where 12.2 is referenced, or the proposal should be moved to 16.13.4 that addresses alternatives to ASCE 7, with a pointer provided to IBC 104.1. Also, the recommendation for a third party review should be project specific. Steve Winkel asserted that with the appropriate language, the CRSC will support the proposal. Nevertheless, the proposal might be affected by the ASCE proposal to alter Chapter 16.
- In a PowerPoint presentation (See Attachment 3 - ) Ron Hamburger described two ASCE proposals, the first to coordinate the IBC with ASCE 7-16, and the second to remove all ASCE 7 related items from the IBC, including exceptions and additions, and only

reference ASCE 7-16 in each section of Chapter 16. The only ASCE 7 material left in the IBC would be alternative ASD combinations used with foundation designs, and live load table additions and exceptions. Currently, the USGS maps have been approved by ASCE and are out for public comment for 45 days, with the closing date around January 1. ASCE 7-16 Supplement 1 is in process with the white cover report expected in March. The two proposals are supported by AISC (American Institute of Steel Construction), ACI (American Concrete Institute), TMS (The Masonry Society) and AFPA (American Forest and Paper Association). NCSEA (National Council of Structural Engineers Associations) is opposed to the second proposal since it believes this proposal violates an agreement reached in 2006 to remove no further seismic related text from the IBC. If differences with NCSEA are not resolved by the end of November, ASCE will not go forward with this proposal. The CRSC recommended that ASCE provide an abstract of information required on structural drawings to building officials, if ASCE material is taken out of the IBC. ASCE will consider an online version of the abstract. The CRSC agreed to support the proposal for coordinating ASCE 7-16 with the IBC, and by a vote of 6 to 1 with no non-votes, agreed to support the proposal to delete from the IBC all ASCE 7 related materials. (With the chair, a quorum of the CRSC was available for the vote. However, this does not impact the CRSC proposal regarding submitting the new seismic design maps previously described).

- Working through BCAC (Building Code Action Committee) Gary Ehrlich intends to propose editorial changes to IBC 2308.3.1 (See Attachment 4 – 2308.3) that clarify the application of sill bolts in SDC D and E, and adds requirement to locate bolts in the middle of the plate.

### **Proposals to be developed for consideration by the CRSC**

- Robert Bachman and John Gillengerten discussed a proposal under development to provide 3” of clearance around sprinkler heads to prevent pipes and other nearby nonstructural components from striking the heads and initiating a discharge, which often causes a large amount of damage after even relatively small earthquakes. On a construction site either sprinklers are installed too close to nonstructural building components, or trades that follow a sprinkler installation install components adjacent to the sprinklers. CRSC members questioned whether the proposal addresses a life safety issue or a resilience issue. If no one is in the building when the sprinkler heads are damaged it is not a life safety issue. John Gillengerten responded that the provision would prevent damage to a life safety system, especially, in small earthquakes, such as the one that occurred in Napa. John Hooper added that the proposal can be tied to critical facilities under Risk Categories 3 and 4. However, the proposal is intended for all buildings. Steve Winkel declared this issue to be an earthquake item pertaining to IBC Chapter 17 and under the purview of CRSC and the meeting attendees concurred. BOMA, AIA and NCSEA should be approached as co-sponsors. NCSEA might not support the proposal since it would have no application east of the Rocky Mountains. The CRSC will need to assess the proposal for approval. Costs of implementing the proposal will need to be delineated since the new provision might raise construction first costs, especially, if inspections are involved. Those conducting the inspections need to

be identified. An owner's agent is the most likely candidate as structural engineers and architects will not want this responsibility. There also need to be assurances the provision will be enforced.

- Working through the BCAC Gary Ehrlich intends to propose an editorial change to 403.4.1 and 403.5 (See Attachment 5 – 403.4.1) in the IEBC that address alterations to include a pointer to 301.1.4.2. The CRSC recommended that the proposal be rewritten since it represents a substantial change, after which the CRSC will determine support.

### **Proposals presented to the CRSC for review only at the meeting**

- Bonnie Manley reported that AISI (American Iron and Steel Institute) will be submitting proposals to incorporate AISI 341 and AISI S400 into the IBC. These standards were balloted by the ASCE Main Committee and will appear in ASCE 7-16. They are not in the 2015 NEHRP Provisions, but are expected to be picked up in the 2020 cycle. AISI also will be submitting AISI S230 on cold formed steel framing for one and two family dwellings for inclusion in the IRC (International Residential Code). AISI S230 is not in ASCE 7-16.
- The CRSC reviewed a proposal (See Attachment 6 – Table 2306.2) previously submitted to the CRSC by Philip Line that will offer an editorial change to Table 2306.2.
- Gary Ehrlich presented a proposal (See Attachment 7 – A301.2) prepared by the CTC (Community-based Therapeutic Care) Health care Committee that will make clear that R-4 dwellings in the IEBC are governed by the provisions of A301.2 that apply to residential buildings of light-frame wood construction containing one or more of the structural weaknesses specified in Section A303. [Ed. Note: This proposal was presented the following day, but is included here as an IBC item.]

The meeting adjourned at 4:00 p.m.

## **NOVEMBER 13, 2015**

### **Participants**

#### *CRSC Members*

Steven Winkel, Steven Winkel, Chair  
Kelly Cobeen, Wiss Janney Elstner  
Dan Dolan, Washington State University  
Gary Ehrlich, National Association of Home Builders  
Perry Haviland, American Institute of Architects  
Jonathan Siu, City of Seattle, Washington

#### *CRSC Advisory Members*

Jon-Paul Cardin, American Iron and Steel Institute (by telephone)  
Bonnie Manley, American Iron and Steel Institute

*Observers*

Jeff Ellis, Simpson Strong-Tie

*FEMA/NIBS*

Mike Mahoney, FEMA

Philip Schneider, BSSC/NIBS

Steve Winkel opened the meeting at 9:00 p.m. PST with participant introductions, a reading of the anti-trust statement, and a review of the agenda.

The CRSC IRC representatives reviewed the ASCE proposals for deleting ASCE materials in the IBC, and CRSC's backup proposal to put the USGS maps in the IBC and IRC, both discussed a day earlier. If the ICC Administrative Committee agrees to update the IBC to ASCE 7-16 it will apply to all of the I-codes, but the IRC might not be correspondingly updated through its Administrative Committee. References from the IRC to the IBC need to be checked for disconnects if no pointers to ASCE 7 are provided in IBC Chapter 16. Additionally, for determining SDC, the IRC contains numerous references to the IBC. Kelly Cobeen will review the IRC for ASCE 7 seismically related material. Since the ASCE proposal does not include the IRC, FEMA was asked to speak with Ron Hamburger about addressing the IRC. Kelly Cobeen, Dan Dolan, Gary Ehrlich and Michael Mahoney will hold a teleconference with Nico Luco and Ken Rukstales to review the IRC maps. The CRSC discussed the possibility that the IRC will retain ASCE 7-10 for wind, but the new IRC maps are independent of the ASCE 7-10 issue.

The following are proposals for modifying the IRC considered by the CRSC and categorized by action taken.

**Proposals to be submitted by the CRSC**

- Kelly Cobeen presented a proposal (See Attachment 8 - R602.10.6.5) that would allow brick veneer to be applied to a second story of a residence without going to more stringent requirements for structural ties. The CRSC suggested that the extent of the veneer on the second story be defined by a percentage of the second floor, rather than its occupied floor area, and that the veneer be limited to one "façade" rather than "face" of the residence. This description would allow for cladding of bays and dormers with returns perpendicular to the elevation. A working group consisting of Kelly Cobeen, Gary Ehrlich, Perry Haviland and John Siu was formed to further develop the proposal.
- Kelly Cobeen presented a rough draft proposal (See Attachment 9 – Appendix U) for seismic repair and retrofit of masonry chimneys to be applied on a voluntary basis. A working group consisting of Kelly Cobeen, Dan Dolan, Perry Haviland and Steve Winkel was formed to further develop the proposal.

### **Proposals to be supported by the CRSC at the hearings in Louisville**

- Working through BCAC Gary Ehrlich intends to propose editorial changes (See Attachment 10 – R301.2.2) to make 301.2.2 item 2 explicit for detached housing, and item 3 explicit for SDC E. The CRSC suggested making item 3 a separate paragraph without an indent. Other changes include combining material for determining SDC C and D, and eliminating lists describing irregularity.

### **Proposals presented to the CRSC for review only at the meeting**

- Michael Mahoney presented a proposal (See Attachment 11 – R101.2) for limiting residences to 3,600 sq. ft. per floor before IBC requirements becomes applicable. The CRSC considers this to be primarily a fire and egress issue.
- Gary Ehrlich presented a proposal (See Attachment 12 – R802.2) that for roof-ceiling construction provides references to details of anchor bolts in masonry and AWC-NDS. AWC (American Wood Council) might address this issue instead.

The meeting adjourned at 2:15 p.m.